THE OPIOID CRISIS: WHAT DOES JUSTICE REQUIRE OF DRUG POLICY?

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A thesis submitted to Johns Hopkins University in conformity with the requirements for the degree of Master of Bioethics

Baltimore, Maryland
August, 2018

Abstract

The American opioid epidemic has shifted in recent years away from its prescription painkiller roots and toward illicit opioids: heroin and fentanyl. The prohibition and criminalization of illicit opioids contributes to increased public health risks relative to prescription opioid painkillers, effectively amplifying the epidemic. Policy solutions will need to address the harms unique to illicit opioids. Using conceptual tools from Ruth Faden's and Madison Powers' theory of Social Justice as the moral foundation of public health, I contextualize the distribution of drug policy harms as contributing to health disparities among disadvantaged groups. This analysis informs policy recommendations to meaningfully address the illicit opioid crisis with special attention to addressing patterns of disadvantage. Policy interventions that fulfill the remedial and aspirational aims of Social Justice entail interrupting the unintended effects of Drug Control, i.e. decriminalization, regulation, and access. Non-ideal policies that operationalize discrete versions of decriminalization, regulation, and access to mitigate the harms of Drug Control are harm reduction policies. I conclude that a reasonable next step that ought to be taken in expanding harm reduction is regulating heroin via heroin assisted treatment within future supervised injection facilities or opioid substitution treatments.

Primary Reader: Travis Rieder, PhD

Secondary Reader: Anne Barnhill, PhD

Acknowledgments

First and foremost, I would like thank Drs. Travis Rieder and Anne Barnhill. Dr. Rieder has been my thesis advisor, closest mentor, and primary thesis reader. Dr. Barnhill has also been a close advisor and my secondary thesis reader. The two of them have provided steady mentorship throughout my time in the Berman Institute, and pushed me to see the big picture in my thesis. They have pointed me to literature that helped me connect dots, told me when to make something assumed explicit, and pushed me to make sound arguments from sound facts. Without either of them this thesis would not have been possible. I owe them a great deal of gratitude.

I would also like to thank other faculty at the Berman Institute and Bloomberg School of Public Health. Dr. Andrew Pekosz facilitated my transition from the laboratory to graduate school, and was always enthusiastic to hear updates and next steps, for which I am grateful. I thank Dr. Holly Taylor, for being the very first person I spoke to about pursuing graduate education at Hopkins and directing me to my first bioethics class. It is because of Dr. Taylor that I met Dr. Rieder and applied for the Master of Bioethics Program. I also thank Dr. Jeff Kahn, Director of the Berman Institute, for helping to make the BI the wonderful place that it is.

I also thank my family and friends, who have provided endless support and encouragement. They have asked me how I was doing and stuck around to hear the answer. They entertained tedious conversations when they didn't have to and otherwise put up with me. Lastly, I thank my beautiful wife, Alivia Stenzel, for her

enduring patience, encouragement, and love. I would not have been able to do a fraction of this work had it not been for her support and kindness. I owe more gratitude to her than words could capture, and I hope to someday be able to repay her for the sacrifices she has made over the past year.

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Background

The U.S. is in the midst of a drug overdose epidemic that in 2016 claimed more American lives than the Vietnam War (Welch, 2017). The epidemic has come about partly from decades of over prescribing opioid painkillers (OPKs) following assurances from pharmaceutical manufacturers that their use for chronic pain conditions was safe and effective and that the risk of addiction was minimal (NIDA, 2018a). The number of prescriptions for OPKs increased from 76 million in 1991 to nearly 270 million in 2013 (Volkow, 2014). According to Centers for Disease Control (CDC) data, opioids were involved in 42,249 out of 64,000 drug overdose deaths in 2016 (CDC, 2016). The cost of the epidemic in 2015, according to a 2017 White House Council of Economic Advisers report, exceeded $500 billion (CEA, 2017).

The opioid epidemic exists as three related waves. First, the epidemic was driven primarily by prescription OPKs throughout the late 1990s and 2000s. In 2010 prescription OPKs accounted for 50% of opioid-related deaths, heroin 14%, and synthetic opioids, including illicitly manufactured fentanyl, another 14%, according to CDC and National Institute of Drug Abuse (NIDA) data (CDC, 2017; Katz, 2017). In response, regulations and guidelines were put in place to reduce prescriptions, educate physicians and patients on risks of opioid use disorder (OUD), make OPKs more difficult to be misused, and hold pharmaceutical companies accountable. In 2012 the state of Kentucky introduced House Bill One (HB1), known as the “pill mill bill”, which contained provisions to limit OPK prescriptions. HB1 also mandated that physicians perform full history and physical of patients, only prescribe OPKs on a short-term basis, as well as

obtain a prescription monitoring program (PMP) report (Huecker & Shoff, 2014). Many other states passed similar legislation limiting OPK prescriptions and requiring similar PMPs. This approach will be referred to as supply-reduction of OPKs. It was originally thought that supply-reduction policies successfully decreased rates of OPK prescribing yet were not sufficient to decrease net consumption of opioids or decrease opioid-related deaths (Huecker & Shoff, 2014; Paulozzi et al., 2014). However, recent data show that while volume of prescriptions decreased, the rate of individuals receiving prescriptions did not decrease (Jeffery et al., 2018).

Rates of opioid prescriptions decreased by 13.1% from 81.2 to 70.6 per 100 persons from 2012 to 2015 (Guy et al., 2017). In pursuit of limiting prescriptions and following PMP legislation there was also a crackdown on OPK diversion. Doctors' offices and pain clinics with extremely high rates of OPK prescriptions leading to diversion, referred to as pill-mills, were shut down. In Florida, nearly two dozen physicians were arrested and over $20 million were seized in the ensuing crack down (DEA, 2011).

Pharmaceutical manufacturers are now facing lawsuits and accountability for their role in the epidemic. Some claims alleged against opioid manufacturers are that their products were defectively designed without safety mechanisms, such as the inclusion of antagonists or tamper-resistant formulations (Haffajee & Mello, 2017). Other claims allege that opioid manufacturers, specifically Purdue Pharma, the maker of OxyContin, failed to warn about the risks of addiction or even intentionally misled doctors and regulators to the same end (Haffajee & Mello, 2017). However, these lawsuits face a barrier in that the FDA approved these drugs to come to market and

failed to regulate how manufacturers interacted with prescribers, thus making it difficult to claim singular causality. Additionally, prescribers, as the gate-keepers of these drugs, failed to appropriately care for patients by erroneously overprescribing and by not having a framework for managing OUD. Fault is spread broadly for the epidemic. The plurality of lawsuits against various pharmaceutical manufacturers, the failure of FDA regulation, and failure of prescribers demonstrate multi-institutional level responsibility for the opioid epidemic.

The CDC and media reporting at the peak of the OPK epidemic focused on overuse and misuse of opioids by patients. This climate resulted in increased stigma and patients were made to feel criminalized in their interactions with physicians and pharmacies (Rose, 2017). Stigma and misconceptions created barriers for pain patients to access needed medication. Some patients who were previously stable on their respective opioid regimens were forced into withdrawal, repeated visits to the ED, and occasionally suicide (Rose, 2017).

Sensible drug policy must account for the double-edged nature of most substances. Opioids are useful and necessary for treating acute pain. They are also dangerous, addictive, and lethal. Policy and practice must ensure that people who need opioids have access to them while the potentially harmful consequences are minimized. However, OPK supply-reduction is inherently forward looking, focusing on prevention of OUD in future patients, and has left those currently affected by OUD unaccounted for. While OPK supply-reduction was a rational response to decades of over-prescribing, the

fact that many people need opioids for pain management and OUD treatment was clumsily short-changed.

Heroin and Fentanyl

OPK supply-reduction has had mixed results and may have contributed to unintended consequences. Rather than weaning the affected population off OPKs in the doctor's office and reducing opioid diversion, OUD, and overdoses, some people with OUD found a cheaper, more readily available supply: heroin. As rates of opioid prescribing decreased, rates of heroin use increased, marking the second wave of the opioid epidemic in 2010. During the years of 2002-2013, rate of past-year heroin use increased 63% from 1.6 per 1,000 persons to 2.6 per 1,000 (Jones et al., 2015). According to NIDA, only 4-6% of people who use opioids for non-medical purposes transition to heroin; however, nearly 80% of heroin users' experience with opioids began with prescription OPKs **(**NIDA, 2018b**)**. According to a 2014 survey by the American Society for Addiction Medicine, 94% of respondents in treatment for opioid addiction said that they chose to use heroin because (diverted) prescription OPKs were too expensive and difficult to obtain **(**ASAM, 2016**)**. From 2002 to 2013 heroin-related deaths increased by 286% (CDC, 2015).

Heroin use is also a risk factor for other health burdens such as HIV, hepatitis, and skin infections. Incidence rate of hepatitis C virus (HCV) infection more than doubled from 0.3 to 0.7 cases/100,000 from 2004-2014 (Zibbell et al., 2018). Researchers have linked accelerating HCV rates to the growing opioid epidemic and injection drug use (IDU). For HIV, despite a long decline, 2015 marked the first year in

two decades where HIV infections attributed to IDU increased from the previous year. From 2014 to 2015 HIV diagnoses attributed to IDU increased from 2,392 to 2,635, the majority of which were attributed to an outbreak of HIV in Scott County, Indiana relating to IDU (Dawson & Kates, 2018).

The third wave of the opioid epidemic came about from the influx of illicitly manufactured fentanyl and other opioid analogues in the drug market, affecting not only heroin but cocaine and even counterfeit OPKs. Following intense interdiction efforts, the market for illicit opioids adapted to manufacture more potent and less bulky substances (Beletsky & Davis, 2017). Starting in 2013, rates of fentanyl-related deaths began accelerating rapidly, increasing 540% from 2013 and 2016 (Katz, 2017). Deaths attributed to synthetic opioids, primarily fentanyl, reached nearly 20,000 in 2016 (O'Donnell, 2017). In 2016 fentanyl accounted for 47% of opioid-related deaths, with prescription OPKs at 34%, and heroin also 34%. Preliminary state-level data has been made available from Minnesota and Maryland for 2017 opioid-related deaths. Minnesota experienced a 75% increase from 2016 to 2017 in synthetic opioid-related deaths, primarily fentanyl (MNDH, 2018). In Maryland, fentanyl-related deaths increased from 1119 to 1594 from 2016 to 2017, a 42% increase (MDDH, 2018).

Policy Focus

OPK supply-reduction is inherently concerned with how the pharmaceutical and healthcare industries ought to operate and how people will be affected by those industries in the future. But the majority of opioid deaths are increasingly related to illicit opioids and not OPKs, at least partly an unintended consequence of OPK supply-

reduction. As the epidemic has shifted away from prescription OPKs to illicit opioids, the harms and risks that characterize the epidemic have also shifted. Policy level solutions aimed at reducing death and disease associated with OUD will need to focus on illicit opioids, injection drug users, and the harms that differentiate illicit opioids from OPKs.

Prohibition & Criminalization

However, Illicit opioids are, by nature, regulated under a system of prohibition and criminalization. U.S. Drug Control policy is beholden to, and has helped shape, international guidelines on drug policy. International drug policy guidelines started with the International Opium Convention in 1912 and have evolved since (Lines et al., 2017). The 1961 *Single Convention on Narcotic Drugs* stated it's aims as "concerned with the health and welfare of mankind", invoking a public health focus (Lines et al., 2017). The second major drug treaty, the *Convention on Psychotropic Substances* in 1972, brought more substances into the fold of international drug policy (Lines et al., 2017). The third major treaty, the *Convention against Illicit Traffic in Narcotics Drugs and Psychotropic Substances* in 1988, reflected a shift away from a health focus and toward a punitive approach to regulating illicit substances (Lines et al., 2017). Within international law, these Drug Control treaties are known as "suppression conventions", which obligate states to use domestic policy, often resulting in punitive criminal laws, to deter activities identified within the treaties (Lines et al., 2017).

Heroin is a schedule 1 drug under the controlled substances act (CSA) of 1970 (DEA, Controlled Substances, n.d.), meaning its manufacture, distribution, sales, and use are legally prohibited in the U.S. Prohibition of illicit substances creates policy levers,

namely criminal prosecution, at every level of the drug market to reduce supply and demand as the primary mechanism of regulating the market for said substances. Enforcement of the CSA is carried out by the Drug Enforcement Agency (DEA). The DEA's mission statement is:

> . . . to enforce the controlled substances laws and regulations of the United States and bring to the criminal and civil justice system of the United States, or any other competent jurisdiction, those organizations and principal members of organizations, involved in the growing, manufacture, or distribution of controlled substances appearing in or destined for illicit traffic in the United States; and to recommend and support non-enforcement programs aimed at reducing the availability of illicit controlled substances on the domestic and international markets (DEA, Mission Statement, n.d.).

It is worth noting that while public health was once an explicit aim of early international guidelines, the words health, prevention, treatment, and recovery are not mentioned in the DEA mission statement. This policy framework has been dubbed the "Drug War" and the "Prohibition Regime" by both proponents and critics (Nadelmann, 1990). I will refer to the combination of prohibition and criminalization here as Drug Control, and specify between prohibition and criminalization where necessary.

The supposed aim of Drug Control is to prevent and discourage people from engaging with potentially harmful substance use. Studies conducted in the late 1990s showed that while substance use decreased on net since the outset of the Drug War in the 1970s, drug-related deaths nonetheless increased in the period corresponding to increased drug law enforcement, while incarceration rates spiked and the unintended consequences of the drug war became evident (Drucker, 1999). Moreover, this policy framework limits the levers that can be pulled to regulate potentially harmful substances.

The supply-reduction response to the OPK wave of the epidemic reflects an assumption of the Drug War: that supply/demand-reduction through law enforcement ought to be a primary focus of policy to minimize the public health burdens of SUD. The end goal of such an effort is, in the case of OPKs, to reduce the number of people exposed to OPKs. In the case of illicit opioids, the end goal is abstinence. As we see in the current epidemic, Drug Control is insufficient to control the flow of illicit substances and reduce their associated deaths, evidenced by accelerating heroin and fentanyl - related deaths. Since the primary policy levers to regulate illicit opioids are prohibition and criminalization, and these policies have not achieved their stated goals of regulating illicit substances, policy makers are unclear how to proceed to curb the epidemic as it pertains to illicit opioids. Less conventional solutions will need to be considered.

Alternative Policies

Public health officials have instead called for expansion of harm reduction services. Harm reduction entails public health services that offer an altogether different approach to SUD than Drug Control. Such services include: needle exchange programs (NEPs); opioid substitution therapy (OST) like methadone and buprenorphine; and overdose reversal medication (naloxone). One harm reduction service not yet sanctioned in the U.S. are supervised injection facilities (SIFs). Of central importance to harm reduction services is that they operate within the health care system, and that individuals are free from criminal prosecution and have legal access to substances or paraphernalia that are highly regulated and controlled. Variations of these policies exist in the U.S. but face public and political opposition and often struggle for funding.

NEPs are a health service where people who inject drugs (PWID) can bring used syringes to a facility, sometimes mobile, in exchange for sterile syringes. These programs have been shown to reduce rates of HIV, hepatitis, and skin infections among injection drug users. Meta-analysis of NEPs in Scotland, Ireland, New York City, Wales, China, Vietnam, Spain, Canada, and Australia by Abdul-Quadar et al show that the implementation of NEPs is largely associated with decreased incidence of HIV and HCV (Abdul-Quadar et al., 2013). NEPs also reduce improperly discarded needles in public, alleviating some of the public nuisance aspect of substance use. Because of the reduced rates of otherwise costly transmissible diseases, NEPs, and other harm reduction services in general also net significant public savings.

OST is a health service where people with OUD are prescribed a regular dose of long lasting, less euphoria-inducing opioids, usually methadone or buprenorphine. This treatment option replaces more dangerous substances like heroin with safer alternatives that ameliorate the symptoms of withdrawal and interrupts the euphoria producing effects of other opioids. These services allow people with OUD to “maintain” a state of normal functioning without using illicit substances. Patients receiving methadone or buprenorphine do so under the supervision of a physician, and is typically for people in long-term recovery rather than someone aiming to taper off an OPK regimen.

Overdose reversal medication is a harm reduction service, the scope of which is to simply prevent as many opioid overdoses as possible. Overdose reversal medication, naloxone, rapidly replaces opioid agonists from their receptors in the brain to prevent

overdose. Several cities have passed legislation that grants citizens a standing prescription for naloxone to ensure broad access to the medication among those most likely to encounter people experiencing a drug overdose. Meta-analysis shows that bystander naloxone training and education programs are associated with decreased rates of overdose deaths and increased odds of recovery (Giglio et al., 2015).

SIFs, not yet legal in the U.S., provide some combination of the above services in a brick-and-mortar facility where people with OUD can safely consume substances, illicit or otherwise, under medical supervision. SIFs have been implemented abroad in countries such as Switzerland, Germany, Netherlands, Norway, Luxembourg, Spain, Denmark, Australia, and Canada. These facilities ensure people who consume potentially dangerous substances have direct access to health care professionals and basic health care services, as well as sterile injection equipment, overdose reversal medication, counseling, drug-treatment referrals, and a support network of other people with OUD trying to remain healthy. Meta-analysis of SIFs shows that they attract the most vulnerable PWID at the highest risk of overdose or infection, promote safer injection conditions, ensure access to primary healthcare, and greatly reduce overdoses (Potier et al., 2014). Moreover, SIFs are shown to not increase injection drug use, encourage more people to become PWID, or increase drug trafficking. Implementation of SIFs also leads to less public injections and less publicly discarded syringes since more injections take place in the facility and used syringes can be exchanged there as well.

Some SIFs even offer prescription heroin in the form of heroin assisted treatment (HAT). This is similar to OST, in that a less safe illicit opioid is substituted for a

more safe, regulated opioid. But HAT differs from other OST in that the primary purpose is not only long-term treatment, but rather specifically to regulate an otherwise unregulated substance. This effectively removes the risk of adulterants like fentanyl, and reduces fundraising crime associated with illicit substance use (Farrell, 2015). Studies show that HAT, though only sparsely implemented, is a successful treatment method for PWID who have otherwise not succeeded with alternative OSTs like methadone (Farrell, 2015).

Despite the uniformly positive evidence in favor of harm reduction services and policies, they face public and political opposition. Many communities that could benefit the most from harm reduction services are chronically under-served as a result. Policy makers have claimed that harm reduction services send mixed messages, and condone drug use or even encourage it. There is a real and rational concern that "supporting" people with various SUD in their addiction enables their illness and does nothing to steer them towards abstinence. The fear is that if syringes are made more readily available that would surely make it easier for PWID to actually inject drugs. If OST is simply substituting one opioid for another, what does that do to steer people toward abstinence? Moreover, it seems like we are actively participating in and facilitating addiction. If PWID know that people near them are likely to carry naloxone they may be less compelled to carefully measure a dose, or even test the boundaries with higher doses knowing somebody nearby could rescue them, resulting in riskier behavior and more overdoses. There are similar concerns with SIFs; the presence of such an establishment would provide a safety net that could result in more people using drugs

who wouldn't otherwise. Empirically, these concerns are generally unwarranted, as harm reduction services have not been shown to encourage drug use, encourage new drug users, or increase crime. However, these concerns make sense on a value-level, where the underlying values of abstinence and harm-reduction seem in tension. It seems apparent that enacting harm reduction services within the framework of Drug Control is incoherent, and these intuitions are not entirely wrong.

The fundamental assumption of harm reduction is that policy ought to be concerned with reducing harms attending to substance use, not necessarily preventing substance use in the first place. Harm reduction policies manifest a normative shift in the policy response to SUD. The fact that an individual may inject heroin is not in itself of moral concern, but the fact that they could overdose or contract HIV/HCV is of moral concern. Accordingly, drug policy ought to be concerned with the most salient aspects of substance use: its harms. In this way, harm reduction does not aim for or require abstinence, although such an aim is consistent with harm reduction. Said otherwise: abstinence, the focus of Drug Control, can fit within a larger harm reduction framework because the value of abstinence is such that one avoids harms attending to substance use. However, harm reduction does not fit neatly into an abstinence-focused framework because it does not take a moral stance toward substance use. If a focus on abstinence assumes substance use is impermissible, then any concession otherwise is seen as permissive, or even encouraging. Thus, expanding harm reduction services while under the regime of Drug Control appears to be incoherent.

Scope of Argument

All of the background on the epidemic, supply reduction, and prohibition/harm reduction policies up to this point suggests that a coherent solution to the opioid epidemic, and SUD in general, remains elusive. When decades of overprescribing OPKs led to a public health crisis via overdose deaths, the response was to clamp down on those industries multiply responsible for the epidemic. But who or what industries are responsible for the public health burdens as they pertain to illicit opioids?

Blame at least partly lies in the poorly executed OPK-supply reduction response which, similar to decades of drug control policies, helped to drive the burdens of OUD further to the margins of society. But, I will argue, significant responsibility for the burdens of the epidemic pertaining to illicit opioids is due to the policies that govern them: prohibition and criminalization. I will then argue that the harms of Drug Control, combined with the shifting scope of the epidemic, are driving health disparities among disadvantaged groups. Using theoretical tools from Ruth Faden's and Madison Powers' theory of Social Justice I will show how the harms produced by Drug Control are a high priority for policy interventions aimed at improving public health. Showing how the most acute harms are produced not just by criminalization but the prohibition of illicit opioids, I claim that addressing prohibition ought to be a key focus of Social Justice within addressing the opioid epidemic. While Social Justice cannot point to specific policy obligations, it can inform what just drug policy ought to aim for. Out of multiple hypothetical ways to fulfill the requirements of Social Justice, I will argue that expanding harm reduction policies while leaving heroin prohibited and unregulated is insufficient

to make meaningful progress. Instead, harm reduction policies that regulate heroin are likely necessary to comprehensively address the harms of Drug Control.

Harms of Drug Control

As described above, Drug Control policies do not effectively accomplish their stated goals of limiting drug supply and demand, and fail to meaningfully reduce the public health burdens associated with SUD. Moreover, these policies are harm-producing policies, their implementation and enforcement resulting in individual and structural level harms that would otherwise not exist, at least not to the same degree. These harms are distributed in such a way to disproportionately affect disadvantaged groups, driving social determinants of health resulting in health disparities in the opioid epidemic.

The most readily apparent harm imposed by drug control is the harm caused by arrest. Illicit opioid users are put in physical and legal jeopardy when they are arrested. Arrest and imprisonment are intentionally harmful, otherwise they would not serve much as a deterrent for criminal activity. Harm by imprisonment is typically justified in order to protect an innocent person such as in the case of rape or murder; or if it is deemed that the offender is deserving of punishment. This is not the case for drug offenses. The person whom the law is supposed to protect is the drug user them self, yet the harms imposed by punishment are disproportionate to the harms of substance use (Barnett, 2009).

Additionally, arrest is a major risk factor for overdose. In the context of the opioid epidemic and injection drug users, drug overdose is three to eight times more

likely to occur in the first two weeks after arrest than prior to or further out from arrest (Merrall et al., 2010). PWID enter the criminal justice system with a certain tolerance and by the time they are otherwise free again their tolerance has decreased. If they proceed to use illicit substances they are likely to return to an approximation of their previous dosage with no way of knowing a correct dosage, and overdose.

Enforcement of drug laws is also shown to alter the behavior of PWID, putting them at greater risk for adverse health outcomes. An increase in police presence has been shown to cause PWID to rush the injection process so as to ensure drugs are consumed before they can be confiscated. Rushed injection can lead to multiple health risks. When injecting in a hurry, PWID are less likely to pre-clean the injection area, increasing risk of infection. PWID are also more likely to engage in needle sharing when police presence increases. Overdose is also more likely during a rushed injection where dosage is not carefully measured or tested for strength (Kerr et al., 2005).

Enforcement also has the effect of driving drug consumption away from public places and into remote, non-public places, such as shooting galleries. When police presence increases to enforce drug laws, those engaging with illicit substances move away from public spaces into less public spaces. Shooting galleries are thus "established" as places where people using illicit substance can go where they are less likely to risk arrest or have their substances confiscated. Risk of lethal overdose is more likely when drug consumption is pushed out of public space into more remote locations. One reason is that an individual experiencing an overdose is less likely to be found by a passerby and those present may be less likely to contact first responders for fear of

arrest. Shooting gallery attendance has also been linked with increased risk of HIV infection from increased needle sharing and unsafe injection practices (Kerr et al., 2005).

Proximity to the criminal market is also a predictor for decreased proximity to the healthcare system. SUD treatment and mental health services have historically been separated and isolated from more mainstream health care such as primary or emergency care. Despite having increased health needs, PWID are less likely to utilize health care services than non-users (Chitwood et al., 2009). Drug law enforcement exacerbates the distance between PWID and health services. Enforcement causes PWID to be less likely to access necessary services like existing NEPs, likely because they want to avoid carrying syringes on their person and risk arrest or confiscation. Indeed, it has been shown that where paraphernalia laws prohibit the possession of syringes PWID have reduced access to NEPs. Paraphernalia laws are even barriers to the establishment of NEPs (Kerr et al., 2005).

The prohibition of illicit substances has the effect of causing drug prices to rise. Drug interdiction, having the effect of inducing scarcity, creates a “risk premium” (Barnett, 2009) for those who engage with the market. Similar to punishment, the risk premium burden for illicit substance users is an intentional deterrent, and it likely does deter some. Yet, for those who are not deterred, artificially increased pricing imposes an undue burden. Higher prices require a higher income for those not deterred. This burden has the unintended consequence of inducing at least some illicit substance users

to further engage in potentially violent or risky crime known as fundraising crime, to fund their addiction (Barnett, 2009).

Prohibiting substances forces those who are not otherwise deterred to engage with the criminal market. This means users must buy from others involved in the criminal market. The lack of regulation necessitated by prohibition means that there are no legal means to resolve disputes or regulate the market, and frequently violence is used a regulator (Kerr et al., 2005). People who use illicit substances are thereby closer in proximity to violence than they would be otherwise. Accordingly, their risk of being involved in a violent incidence is subsequently higher than if they were purchasing alcohol or tobacco, or receiving a prescription from a doctor's office or clinic (Kerr et al., 2005).

The fact that illicit substances are manufactured and distributed in an illicit market means there is no oversight, accountability, or enforcement of quality controls. Drawing on the lessons from alcohol prohibition, Beletsky and Davis show how the pressures of supply-side interdiction have the unintended consequence of making manufacturers seek to make increasingly potent, less bulky substances (Beletsky & Davis, 2017), known as the Iron Law of Prohibition (Iron Law of Prohibition, 2018). Its effects are manifest by fentanyl in the opioid crisis. Beletsky and Davis claim that because the Iron Law of Prohibition has been well-established in economics, the phenomenon of fentanyl-contaminated heroin and other illicit substances should have been foreseen or at least predicted by policy makers following OPK supply-reduction (Beletsky & Davis, 2017).

The harms of Drug Control policies stem directly and indirectly from the mechanisms of supply and demand reduction. Prohibition of illicit opioids necessitates their lack of regulation in the criminal market, introducing quality-control risks and inducing the iron law of prohibition, driving the risks of fentanyl. The criminalization of people involved in the market for illicit opioids, particularly at the level of the consumer, though not exclusively, exacerbates the risks of overdose and contracting disease, and decreases access to health care. Drug Control can then clearly be described as adversely affecting public health and the health of PWID, imposing harms independent of substance use itself. While these harms may be morally problematic simply because they have a negative impact on overall welfare, it is the distribution of these harms that raises Justice-based concerns.

Social Justice

Faden and Powers demarcate health, personal security, reasoning, respect, attachment, and self-determination as irreducible dimensions of well-being whose distribution is the focus of Justice. These dimensions are such that any life that is seriously lacking in one is a life deficient in what a reasonable person would desire of their life, regardless of other projects (Social Justice, pg. 29). Faden and Powers purport that the first job of justice is "permanent vigilance and attention to determinants that create, compound and reinforce insufficiencies across [these] multiple dimensions of well-being" (Faden & Powers, 2008). Their theory adopts a prioritarian view of distributive justice, which states that factors that impact the dimensions of wellbeing ought to be distributed in such a way to benefit those most disadvantaged (Social

Justice, pg. 54-55). To this end they propose positive and negative points of Social Justice. The negative, or remedial, point of Social Justice entails policing of existing patterns of disadvantage that undermine well-being across these dimensions and obligates interventions, policy or otherwise, to remedy those patterns of disadvantage (Social Justice, pg. 87). The positive, or aspirational, point of Social Justice is a commitment to prospectively design social structures and policy in such a way as to avoid patterns of disadvantage (Social Justice, pg. 72) and ensure sufficiency of the multiple dimensions of well-being (Social Justice, pg. 95).

The non-medical factors influenced by social policy that result in disadvantage in these important dimensions of well-being are social determinants of health. The usual candidates are poverty, lack of education, lack of proper housing, lack of clean environment, and lack of social integration (marginalization). A common theme among social determinants of health is their relationship with public policy and ability to be remedied through policy. And indeed, it is a central claim of Faden's and Powers' theory that Social Justice obligates certain policy interventions to remedy systematic disadvantage, avoid future patterns of disadvantage, and ensure sufficiency of well-being (Social Justice, pg. 87). To this end, the harms produced by drug policies are precisely the sort of targets of policy interventions called for by Social Justice.

Drug Control and Health Disparities

The harms of drug control are such that the policies of prohibition and criminalization result in morally salient health disparities. Drug control harms are not just bad for overall welfare, at least in the context of the opioid epidemic, but they are

distributed in such a way to be considered unjust. Health disparities, according to Braveman et al, cannot be defined apart from an understanding of social disadvantage. They claim that health disparities are "systematic, plausibly avoidable health differences, adversely affecting socially disadvantaged groups." (Braveman et al., 2011). Socially disadvantaged groups, defined by Braveman et al, are groups of people who experience disadvantage in unfavorable social, economic, or political conditions in a systematic way (Braveman et al., 2011). Categories like class, race, gender, sexual orientation, illness, or any other identifying characteristic associated with marginalization and disenfranchisement are likely to experience health disparities. The harms caused by prohibition and criminalization are distributed in such a way to disparately affect previously disadvantaged groups, namely people with OUD generally, IUD specifically, and African Americans.

People with OUD, particularly PWID, experience social disadvantage. Social disapproval of SUD consistently ranks highest in degrees of disapproval among other potentially stigmatized conditions, such as being wheelchair bound or obese (Room, 2005). SUD stigma can arise from multiple causes. It can be deployed as a means of social control by family and friends, or arise from the classifications and decisions of medical and healthcare professional communities, or be carried out or mediated by policy. While the opioid epidemic has affected multiple groups and social strata, illicit opioid users bear the greatest burden of stigma and its harms. As the epidemic has shifted from OPKs to illicit opioids, the stigma that follows those affected has shifted

toward more disadvantaged groups. This is partly because illicit opioid users tend to consist of other structurally vulnerable and stigmatized groups (Buchman et al., 2017).

The processes of stigma play a causal role in the distribution of life opportunities like housing, employment, and education (Link & Hatzenbuehler, 2016). Generally poor socioeconomic status (SEC) is discussed as a social determinant of SUD. However, the causal arrows are bidirectional. The stigmatization and marginalization of people with SUD can drive a downward cycle of lower SEC, begetting further health disparities (Room, 2005). SUD stigma is discussed in health literature as a health determinant to be overcome. In criminal justice literature, however, stigma against SUD is actively embraced, systematized through criminal laws, and deployed intentionally as a deterrent to substance use. Drug Control policies, through criminalization of SUD, intentionally harness institutional stigma and social harm against people with SUD, resulting in health disparities for already socially disadvantaged groups. The shifting scope of the epidemic, combined with the harms of Drug Control, mean that people further to the margins of society are increasingly bearing the burdens of the opioid epidemic and its ancillary harms.

While the opioid epidemic has disproportionately affected white Americans, the harms resulting from Drug Control policy, affecting illicit opioid users, disproportionately affect African Americans. African Americans are significantly more likely to interact with police and be the subject of enforcement of criminal drug laws. Prior to 1980 the arrest rate for African Americans was 554 per 100,000 and for white Americans it was 190 per 100,000, approximating a ratio of 3:1. By 1990 these rates rose to 2009 and 363 per

100,000 for African Americans and white Americans, respectively, approximating a ratio of 5.5:1 (Mitchell & Caudy, 2013). It is plausible then that the side effects of drug criminalization, including lack of access to health care, unsafe injections, and higher rates of HIV/HCV disproportionately affect African Americans. Indeed, studies conducted in the 1990s demonstrated that although illicit substance use is similar across demographics, new cases of HIV infections resulting from injection drug use were manifold higher in African Americans than white Americans (Drucker, 1999). And while HIV incidences have declined overall by 32% between 2010 and 2014 (HIV Among People Who Inject Drugs, 2018), incidence fell only 8% among African Americans overall (HIV Among African Americans, 2018). The majority of new cases of HIV and HCV are attributed to injection drug use (Dawson & Kates, 2018), and it is plausible drug control policies are at least partially responsible for the racially disparate rates in HIV/HCV among injection drug users.

Further, white Americans are disproportionately represented in all categories of opioid-related overdose deaths, yet the demographics have begun to shift as the burdens of the opioid epidemic have been pushed to further marginalized groups. While fentanyl and heroin-related deaths have spiked across all demographics, African Americans are experiencing a faster acceleration in opioid death rates as a result of fentanyl than any other demographic. From 2010 to 2016 the opioid death rate among white Americans rose 92% from 9.1 to 17.5 deaths per 100,000. For African Americans the opioid death rate rose over 300% from 3.4 to 10.3 deaths per 100,000 (Kaiser Family Foundation, 2016). This indicates that as the epidemic has shifted to illicit opioids,

African Americans, who were previously shielded by racial disparities in access to health care and prescription OPKS (Singhal at al., 2016), have begun to be affected in a way they previously were not.

Discussion

Drug Control policies produce the sort of health disparities for socially disadvantaged groups that are clearly the focus of the vigilance of Social Justice. These harms are morally salient insofar as they exacerbate rather than remedy existing injustice. In its negative, remedial aim, Social Justice requires interventions that remedy the harms historically imposed by Drug Control. In its positive, aspirational aim, Social Justice requires drug policy to be crafted in such a way as to avoid health disparities and to guarantee sufficiency across dimensions of well-being. While the two aims of Social Justice could theoretically point to different policy interventions, where one set of policies are remedial in nature and another aspirational, it is likely that one comprehensive set of policies will suffice. This set of policies will need to accomplish both aims: remedy historic harms from Drug Control and ensure that future health disparities do not arise from drug policy. The scope of policy aimed addressing the harms of Drug Control will necessarily involve some combination of regulation, access and decriminalization to counteract the harms of prohibition and criminalization.

One policy proposal to mitigate Drug Control harms is to merely decriminalize illicit substances, or at least decriminalize heroin use. Under such a policy, certain amounts of substances would be permitted for personal possession and consumption. This could avoid many of the harms that are consequences of the criminalization of illicit

opioids. It could also embody the focus of Social Justice on prioritizing the disadvantaged and those disparately harmed by Drug Control via arrest and stigma resulting from criminalization. However, there are serious drawbacks to mere decriminalization. The first is economic: removing a major deterrent from the demand for illicit substances could, presumably, lead to increased demand and therefore increased supply. Without regulation, increased supply of potentially lethal illicit substances would only serve to exacerbate the epidemic and health disparities within. Further, decriminalization makes a false distinction between user and seller. It assumes that we could do away with the harms of criminalization for people with SUD but still enforce supply side interdiction efforts. However, many people with SUD participate in sales and distribution partly as a means of funding their own SUD. In this way, the distinction between being soft on PWID and being hard on people who sell or distribute breaks down. So mere decriminalization could remedy some of the harms of Drug Control, but it has many drawbacks that would leave the disadvantaged still worse off.

Another policy approach that could mitigate the harms of Drug Control, with a focus on prioritizing the disadvantaged, would be to expand existing harm reduction services. Many public health researchers have claimed that the way out of the opioid epidemic is to do just this (Saloner & Sharfstien, 2016; Breen & Fiellin, 2018; Olsen & Sharfstein, 2014). People in the field of public health have called for increased funding to expand OST programs and increase access to methadone and buprenorphine, implementing NEPs where they do not already exist, and ensuring broader access to naloxone. While not yet established in the U.S, legislation has been proposed or is

underway to implement SIFs in cities like Seattle, Philadelphia, Denver, Vermont, Delaware, and San Francisco to mitigate death and disease among PWID (Allyn, 2018). Many believe that SIFs will be necessary to mitigate death and disease in the opioid epidemic, and they will be, but they will be insufficient. While expanding harm reduction services is likely necessary to prioritize the disadvantaged and save lives in the opioid epidemic, the harms produced by drug prohibition, namely fentanyl, remain unaddressed.

In my view, the current debate about drug policy and what people with OUD are owed misses this central tension: the policies of prohibition and criminalization of illicit opioids produce harms that effectively amplify the opioid epidemic, and while harm reduction policies can effectively address the public health burdens of SUD, expanding harm reduction policies within the paradigm of drug prohibition is incoherent. For example: fentanyl test strips can allow people who use heroin to test for the presence of deadly fentanyl and thus avoid a potentially lethal injection, but a hypothetical set of policies that regulate heroin, rather than maintain its prohibition, could eliminate the threat of fentanyl entirely, by eliminating the incentive to sell it rather than heroin. It is precisely for this reason that NEPs are successful: rather than a hypothetical intervention that would allow injection drug users to test if their injection equipment is contaminated NEPs simply offer access to sterile, quality-controlled, otherwise prohibited drug paraphernalia. This tension between prohibition and access will need to be addressed in order to make real meaningful progress on curbing deaths from illicit opioids and prioritizing Justice in drug policy.

It seems evident that the best policy interventions that fulfill the aims of Social Justice will necessarily involve regulation of heroin. This is not to say the regulating heroin is obligated by Social Justice, rather it is seemingly the best option to fulfill the requirements of Social Justice in drug policy pertaining to illicit opioids. This means that merely expanding harm reduction or even implementing SIFs will likely be insufficient to meaningfully reduce death and disease in the opioid epidemic, and thus insufficient to remedy the health disparities within. What is likely required is the implementation of heroin assisted treatment, similar to other OSTs. This would entail establishing some overarching regulatory framework for heroin that would occupy a similar space within the FDA as methadone and buprenorphine. Implementing HAT, either within methadone/buprenorphine clinics, or future SIFs, would discretely operationalize regulation, access, and decriminalization and thus remedy the harms of Drug Control. Criminal prosecution may still be appropriate in a limited capacity to limit prescription heroin diversion. But possession or use of heroin, consistent with a prescription, would not be criminalized, and regulation would be able to at least partly mitigate the risks of fentanyl. Indeed, SIFs in Holland, Germany, Spain, Canada, and the UK that have structured heroin prescription programs are shown to be an effective treatment for heroin dependence and greatly reduce the risk of adulterants (Farrell, 2015).

Conclusion

The opioid epidemic, as it has shifted from OPKs to heroin and fentanyl, has become increasingly shaped by Drug Control policies. These policies serve to amplify rather than mitigate the epidemic and result in health disparities among disadvantaged

groups. These health disparities and their policy causes are the focus of Social Justice as the moral foundation of public health. Social Justice requires attention to the role of Drug Control as driving health disparities, and policy interventions to mitigate the harms of Drug Control. Remedying the harms of drug prohibition and criminalization entails regulation, access, and decriminalization. Harm reduction policies that operationalize regulation, access, and decriminalization will be necessary. While expansion of harm reduction services like OST, NEPs, and eventually SIFs will be necessary to avoid future health disparities from SUD and to prioritize the already disadvantaged, it is likely they are insufficient by omitting the regulation of heroin. Therefore, pairing harm reduction expansion with regulation of heroin via HAT provides the most comprehensive and coherent approach to mitigating the burdens of the opioid epidemic pertaining to illicit opioids and ameliorating the health disparities within. This tipping point represents a paradigm shift, where prohibition and criminal enforcement are no longer the rule but the exception, and regulation and access are the norm.

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Biography

Rob Stenzel was born in Trenton, New Jersey USA, in 1991. He did his undergraduate education at the University of Maryland, Baltimore County, where he graduated with a bachelor of science degree in 2013. During his senior year at UMBC he completed an internship at Johns Hopkins where he studied pain modeling in mice and rats. He did not enjoy this work. After graduating, he worked at the J. Craig Venter Institute in Rockville, MD. At JCVI he conducted metagenomic research on the human microbiome studying Type 1 Diabetes, as well metagenomic virology, characterizing strains of influenza in avian populations.

Leaving JCVI in 2016, Rob took a position in a laboratory studying influenza in the Johns Hopkins Bloomberg School of Public Health. There, he met faculty in the Berman Institute of Bioethics and began taking classes. He matriculated into the MBE program in 2017 and finished in 2018. His interests in Bioethics include issues surrounding beginning and end of life, public health ethics, human rights, and drug policy. He has worked as a Legislative Advocacy Intern with the Baltimore Harm Reduction Coalition, and is currently at the American Association for the Advancement of Science as of the summer of 2018.